**Lesson Topic**

## Water Distillation

## State Standard

7-MS-PS1-2

**Lesson Goal**

Apply the process of distillation to produce fresh, drinkable water from a saltwater solution.

**Relation to USS Kidd**

The Kidd has a water distillation plant that can distill 12,000 gallons of water a day. Turning salt water into fresh water.

**Objectives**

Students create a simple distillation device to remove pure water from a saltwater

**Materials needed for lesson**

Large bowl

Heavy glass cup

Teaspoon

Clear plastic wrap

Coin

Clear tape

Blue food coloring

Water

Table salt

Ruler

Lesson

Guide the students through the steps.

1. Pour tap water in the bowl about2 inches deep.

2. Add blue food coloring

3. Add 2–3 teaspoons of salt to the water.

4. Stir until the salt is dissolved.

5. Place the heavy glass cup in the center of the bowl Make sure that the cup sits flat on the bottom of the bowl.

6. Put a covering of plastic food wrap over the top of the bowl.

7. Tape the plastic wrap to the sides of the bowl so that air cannot escape. Make sure the plastic wrap is not pulled tightly across the top of the bowl.

8. Place a coin on the outside of the plastic wrap directly over the center of the glass. Make sure that the weight of the coin makes the plastic wrap slant down toward the center of the glass.

9. Put the bowl on a flat surface outside or on a windowsill where it will get a lot of sunshine.

10. Leave the bowl in the sun for four hours.

11. After four hours, take off the plastic wrap and lift the glass out of the saltwater solution. Measure the height of the saltwater solution left in the bowl and compare to the original measurement.

**Assessments**

The results of the experiment should produce salt free water in the glass cup.